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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/049,288	03/26/1998	LOUIS COUTURE	81862.P082	5321

7590

07/17/2002

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EXAMINER

NGUYEN, PHUONGCHAU BA

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 07/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/049,288

Applicant(s)

COUTURE, LOUIS

Examiner

Phuongchau Ba Nguyen

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on cpa 5-7-02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-87 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-7,14-21,25,26,29,30,35-39,41,44,45,49-52,54-57,61-72,76-83,86 and 87 is/are rejected.
- 7) ☐ Claim(s) 2,3,8-13,22-24,27,28,31-34,40,42,43,46-48,53,60,73-75,84 and 85 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

*Claim Objections*

1. Applicant is advised that should claims 54–57, 61–68 be found allowable, claims 69–72, 76–82 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

*Claim Rejections – 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

As claim 87, A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. In re Hyatt, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held no enabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to Hyatt is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor.

*Claim Rejections – 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4–5, 14, 18–20, 25, 29–30, 35, 37–39, 41, 44–45, 50–52, 54–56, 69–71, 83, 86, and 87 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaewell, Jr. et al (USP 5,436,955).

Regarding claims 1, 25, 41, 54, 69, 83, 86 and 87, Kaewell teaches a method for supporting DSP of a plurality of data types comprising the steps of continuing broadcasting (the data received continuously at rate 48.6 k-sample/sec the transmitting rate would be 8 k-sample/sec, and transmitted continuously at 20 k-symbols/sec; figs. 2, 5, 3; col. 3, lines 9–29; col.4, lines 28–30; col.2, lines 65–68 to col.3, line 1 and col.4, lines 53–68) a plurality of firmware algorithm to a plurality of DSP engines (11, 12, 13, 14) over a

channelized serial bus (T1), selectively monitoring and receiving at least one firmware algorithm of the plurality of algorithm by at least one DSP engine wherein the at least one firmware algorithm is used to process data of at least one corresponding data type received by the at least one DSP engine over at least one data line.

Regarding claims 4, 29 and 44, the channel unit having the DSP engine which is configured as analog or digital channel unit is capable of communicating bidirectionally with the local telephone company central office in PCM format (see col. 2, line 62 to col. 3, line 8).

Regarding claims 5, 30 and 45, bidirectional host bus is depicted in figure 3.

Regarding claims 14, 19–20, 38–39 and 51–52, each TI voice channel carries traffic (DSP firmware) to one RAM for one DSP (see col. 3, lines 52–68).

Regarding claims 18, 37 and 50, each DSP engine handles at least one channel.

Regarding claims 35, 55–56, 70–71, figure 1 shows the interconnection between the mobile switching center and the PSTN from which multiplexed data would be transmitted to the base station via the mobile switching center.

*Claim Rejections – 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6–7, 15–17, 21, 26, 36, 49, 57, 61–63, 72 and 76–78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaewell, Jr. et al (USP 5,436,955).

Regarding claims 6, 15–16, 21, 26, 57, the DSP algorithms are broadcasted to the DSP engines (11–14) from a firmware source via SPDF interface 32, logic 31 and bus 30 (see col. 4, lines 14–21). Although Kaewell does not specify that the

firmware source is a master DSP engine, it would have been obvious to one of ordinary skill in the art at the time the invention was made to with the motivation being to use a master DSP engine as the firmware source for providing the DSP engine with the DSP firmware with the motivation being to facilitate DSP transmission control.

Regarding claim 7, the channelized serial bus (T1,Kaewell) has at least eight channels

Regarding claims 17, 36, 49, 61–63, 72 and 76–78, Although Kaewell does not specify that wireless traffic can comprise data, voice data, audio data, video data and facsimile data, such data types are considered old and well known in the art of wireless communications for the purpose of supporting various communication needs. Thus, it would have been obvious to one skilled in the art to provide Kaewell's system with traffic comprising data, voice data, audio data, video data and facsimile data with the motivation being to support various communication needs.

5. Claims 64–68 and 79–82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaewell, Jr. et al (USP 5,436,955) in view of Neubauer (6,269,095).

Kaewell does not explicitly disclose the processing comprising echo cancellation, voice coding, modem relay, facsimile relay.

Neubauer discloses in figure 1 a gateway comprising a host computer 1006, voice payload data processing unit 1008, wherein a voice payload data processing unit 1008 comprises a plurality of digital signal processors DSP, wherein one DSP handles the call processing (e.g., real-time vocoding, silence suppression, echo cancellation,  $\mu$ -law/a-law conversion, etc.), and the host computer 1006 (modem/facsimile relay) includes a conversion unit 1006a and a fax processing unit 1006 for supporting voice and fax operations {col.1, lines 21–43}. Therefore, it would have been obvious to a skilled artisan to provide Kaewell's system with the DSP handling the call processing (e.g., real-time vocoding, silence suppression, echo cancellation and the motivation being to support various communications needs {figs. 1–2, 4, 6}.



*Allowable Subject Matter*

6. Claims 2-3, 8-13, 22-24, 27-28, 31-34, 40, 42-43, 46-48, 53, 58-60, 73-75 and 84-85 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Response to Arguments*

7. Applicant's arguments filed 5-7-2002 have been fully considered but they are not persuasive.

A/. Applicants argued in pages 18-22 that Kaewell does not disclose CONTINUOUSLY BROADCASTING a plurality of firmware algorithm to a plurality of DSP engines over a channelized serial bus.

In reply, applicants are directed to figures 2, 5, 3 wherein the Slot Processing Module SPM 10 (figs. 2 & 5) comprises RX DSP receiving voice signals via RF antenna (broadcasting) outputting to TX DSP (continuously) at 20 k-symbols/sec (the transmitting of plurality of data at a rate constitutes the continuously of data transmission, emphasis added){see column 5, line 31 to

col.6, line 29 and col.4, lines 24–30 wherein the data output from plurality of DSP are transmitted by TX DSP 15}. Also, the plurality of DSPs 11–14 (a plurality of DSP engines as claimed) are loaded with firmware configuration commands (plurality of firmware algorithm as claimed) on column 4, lines 4–19.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchau Ba Nguyen whose telephone number is 703–305–0093. The examiner can normally be reached on Monday–Friday from 10:00 a.m. to 3:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 703–308–6602. The fax phone numbers for the organization where this application or proceeding is assigned are 703–872–9314 for regular communications and 703–872–9314 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

*PN*

Phuongchau Ba Nguyen  
Examiner  
Art Unit 2665

July 15, 2002

*Steven Hays*  
*7/15/02*